

## **R E M A R K S**

Claims 6-18 are in the case. Claims 7-18 are withdrawn from consideration on the merits, Claims 10-18 due to the Requirement for Restriction, and Claims 7-9 due to the election of species. Thus, only Claim 6 is presently under consideration.

Claim 6 has been amended. The amendment specifying that the insulating material is flexible is supported at least at Page 1, lines 7-8, and at Page 5, lines 17-19, of the Specification. The amendment stating that the ceramic particles have thermal insulating properties finds support at least on Page 5, lines 10-13 of the Specification.

Claims 7-9 have been amended as discussed below. Amendment of withdrawn claims is permissible, and may make the withdrawn claims eligible for rejoinder (see M.P.E.P. §§821.04-821.04(b)). It is noted that Claims 6-18 were indicated to be generic, at least as to the species election, in the Office Action mailed on November 30, 2001, at Page 3, last sentence.

### **Objections to various items**

In the present Office Action, objections are made regarding several items. These items are addressed in the order presented in the Office Action.

On Page 2 of the Office Action, it is indicated that the amendment to Page 6, line 8 of the Specification made in Response to the previous Office Action is improper. The amendment to Page 6 of the Specification is now submitted to be proper because "C<sub>12</sub>-C<sub>13</sub> alkyl glycidyl ether" is underlined. Entry of this amendment is respectfully requested.

The Office Action at Page 2, paragraph 4, recognizes Epon 8132 as a polyacrylate epoxy resin. Applicants submit that this is a typographical error in the Office Action, in which Epon 8161 was intended. In the previous Response, the paragraph in the middle of Page 6 of the Specification was amended to state that Epon 8161 is a polyacrylate epoxy resin. The same paragraph states that Epon 8132 is a mixture of epoxy resin and C<sub>12</sub>-C<sub>13</sub> alkyl glycidyl ether.

Objection is made on Page 3 of the Office Action regarding a lack of consistency in the

terminology for

the component of the epoxy mixture on Page 4, line 22 of the Specification, and Claim 6, line 3, identified as "acrylic resins";

component d) of Claims 7-9, which is referred to as a polyacrylate copolymer; and

Byk<sup>®</sup> 361, which is mentioned on Page 6, [*sic*, 7] lines 11-12, of the Specification without further description.

The Examiner has helpfully pointed out that Byk<sup>®</sup> 361 has CAS<sup>®</sup> registry number 134633-08-2, and is an acrylic resin. Recent product data sheets from Byk indicate that the exact composition and the CAS<sup>®</sup> registry number are proprietary. However, the data sheets do indicate that Byk<sup>®</sup> 361 is a polyacrylate, so in all of the listed locations, the objected-to phrases have been replaced with "acrylic resin".

Objection is also made on Page 4 of the Office Action regarding the description of Epon 8161 (again incorrectly identified as Epon 8132) as a polyacrylate epoxy resin in both Claim 7 and the paragraph on Page 6 of the Specification. In both locations, the objected-to phrases have been amended to be "epoxy diacrylate resin", as suggested by the Examiner and supported by Page 11 of the Epon resin brochure published by Hexion.

If the interpretation of Epon 8132 as intending to mean Epon 8161 is incorrect, Applicants hereby request an opportunity to respond in the context of a non-Final Office Action, to the extent that any action other than a Notice of Allowance is issued hereafter.

### **Objections to the Drawings**

The drawings have been objected to as informal regarding the border and title block. Accompanying this Response are Replacement Sheets for the drawings that correct the noted objections, and are believed to be formal. In the corrected drawings, the border and title block have been deleted, and the circles around the reference numbers have been removed.

Applicants believe that Annotated Sheets are not required in this instance. According to 37 C.F.R. §1.121(d)(1), a marked-up copy of an amended drawing figure *may* be included (emphasis added). Further, M.P.E.P. §608.02(w) lists several examples of situations in which annotated sheets are not needed; the present amendments to the drawings fall under example (C),

removing superfluous matter.

### **Rejections under §103(a) over Wolf, Scarlett, or Neuner**

Claim 6 stands rejected under 35 U.S.C. §103(a) as obvious over the following three references, taken separately:

U.S. 6,274,939 (Wolf );

U.S. 6,956,079 (Scarlett); and

U.S. 6,160,041 (Neuner).

It is noted that these three rejections are discussed together in the Office Action, although a combination rejection was not made. Each rejection will be discussed in turn. Applicants traverse the rejections and respectfully request reconsideration of the rejections.

#### **A. Wolf**

Wolf and the present case are directed to different purposes. The present case is directed to flexible coatings having thermal insulating properties, as reflected in amended Claim 6. Wolf is directed to coatings for semiconductors capable of providing a magnetic field (column 2, lines 11-13). More particularly, Wolf states that the ceramic filler is "in an amount effective for providing the resulting composition with a magnetic field of at least about 1 gauss" (column 2, line 66 to column 3, line 1), and specifies that "ceramic fillers of the present invention include strontium ferrite, barium ferrite and any equivalents" (column 5, lines 26-28). Further, as the Examiner has noted, Wolf does not disclose acrylic resins.

There is nothing in the disclosure of Wolf that would have suggested thermally insulating particles, nor that the coating can or should be flexible. Nowhere in Wolf is there any indication regarding the rigidity or flexibility of the coatings taught therein. Wolf does not establish a *prima facie* case of obviousness.

Thus, reconsideration and withdrawal of this rejection is requested.

#### **B. Neuner**

Neuner is directed to a "concrete-like material" (abstract), and explains that the polymer blends taught therein "may be used as a substitute for concrete in a wide variety of structures which utilize concrete as a principal material" (column 3, lines 11-13). Concrete is well-known

for its rigidity. In sharp contrast, Claim 6 is directed to a *flexible* material. Also, as the Examiner has noted, Neuner does not disclose acrylic resins.

The disclosure of Neuner would not have made it obvious to one of ordinary skill in the art that a flexible material was desirable, much less how to make such a flexible material. Neuner therefore cannot establish a *prima facie* case of obviousness.

Thus, reconsideration and withdrawal of this rejection is requested.

### **C. Scarlett**

Scarlette is not enabling in regard to flexible resins and thermally insulating resins. Thermal insulation is not mentioned in Scarlett; "desirable coating characteristics such as flexibility, hardness, adhesion, transparency, translucency, and the like" (column 1, lines 32-35) are mentioned, but no indication is provided regarding how to achieve such properties.

Further, Scarlett does not teach or suggest combining the ceramic grains with the epoxy and with the curing agent separately before combining the epoxy and curing agent, a feature of Claim 6. Instead, Scarlett shows that a single mixture is formed, and the ceramic grains are added last (see *e.g.*, Example 1). Scarlett again cannot establish a *prima facie* case of obviousness.

Thus, reconsideration and withdrawal of this rejection is requested.

Although no combination rejection was formally made, the Office Action does state on Page 5 in paragraph 11 that it would have been obvious to add the Byk 361 (acrylic resin) of Scarlett to the formulations of Wolf and Neuner in order to control the flow.

As already described, Scarlett is not enabling for flexible resins and thermally insulating resins. Combination with Wolf does not cure this defect, as Wolf does not teach or suggest flexible or thermally insulating compositions.

As described above, Neuner is directed to a "concrete-like material", for use instead of concrete. Scarlett is directed to abrasion-resistant coatings. These purposes are not compatible, and so this is not a viable combination of references. Thus, no combination of the cited references can assist the Examiner in meeting the burden of establishing a *prima facie* case of obviousness.

The Office Action at Page 5, paragraph 13 states that it would have been obvious to combine the epoxy and curing components of the references in a 1:1 ratio by volume in order to optimize the uniformity of the mixture as well as the curability. Applicants submit that it is not necessarily easy to prepare mixtures that can be combined in the 1:1 ratio, which is alluded to in the Specification, which states that "Both mixtures were developed with carefully controlled viscosities and volumes so that each mixture is combined at a 1:1 ratio by volume to create the final product." (Page 5, lines 1-3). In particular, the primary consideration is to have a number or weight of equivalent per epoxy groups and an equal number of equivalents of the hardener. Similarly, when multiple epoxies and multiple hardeners are included in an epoxy formulation, it is best to have the total weight of equivalent epoxies and an equal total weight of equivalent hardener materials. Another factor is that the total volume of parts A and B are established with all of the ingredients that are included in the formulation, and the other ingredients must be divided between parts A and B to establish the desired volume blending ratio for parts A and B.

**Rejections under §103(a) over Bluem et al.**

Claim 6 stands rejected under 35 U.S.C. §103(a) as obvious over U.S. 6,214,460 (Bluem et al.). Applicants traverse this rejection and respectfully request reconsideration thereof.

Bluem et al. is directed to two slightly different compositions: a screen-printable pressure-bondable adhesive, and a heat-curable adhesive film, which is thermally and/or electrically conductive. As described above, the compositions of Claim 6 are thermally insulating, not thermally conductive.

Silica is described by Bluem et al. as a filler which imparts thixotropic properties to the mixture that will become the adhesive (column 5, lines 59-63). Example 24 of Bluem et al. is directed to the preparation of screen-printable adhesives, but ceramic particles are only mentioned in connection with the heat-curable adhesive films. Bluem et al. states that the ceramic particles are coated with an electrically conductive coating (column 14, line 64, to column 15, line 3); the use of ceramic particles without an electrically conductive coating is not contemplated therein.

The remarks made above regarding the 1:1 volume ratio in Claim 6 apply equally here. In addition, Bluem does not teach or suggest forming two mixtures and then combining them; instead, all of the ingredients are added into one mixture. Bluem et al. therefore fails to establish a *prima facie* case of obviousness.

Thus, reconsideration and withdrawal of this rejection is requested.

**Prior art not relied on**

The Office Action describes Corley et al. (U.S. 6,127,508) as not relied on, but pertinent to the disclosure. Applicants do not need to comment on this reference.

In light of the above amendments and foregoing remarks, the case is believed to be in condition for allowance. Prompt notification to this effect would be sincerely appreciated.

If any matters remain that require further consideration, the Examiner is requested to telephone the undersigned at the number given below so that such matters may be discussed, and if possible, promptly resolved.

Respectfully submitted,

*/R. Andrew Patty II/*

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